To Be Assigned MAT-8762US

## **Amendment to the Abstract:**

Application No.:

The Abstract has been amended. A revised Abstract is attached.

## **ABSTRACT**

A pupil detection device includes an image data extraction unit (220)-for determining a plurality of concentric circles on an eye image respectively as integrating circles; and extracting the image data of the eye image positioned on the circumferences of the integrating circles; a pointer unit (260) for indicating center coordinates of the integrating circles; a contour integrating unit (230)-for integrating the image data extracted by the image data extraction unit (220)-along the respective circumferences of the integrating circles; a pupil radius detection unit (250)-for detecting that the integrated value of the integrating circle has changed stepwise with respect to the radius of the integrating circle; a pupil position detection unit (280)-for detecting that the center coordinates of the integrating circle as pupil position coordinates when the integrated value of the integrating circle is changed stepwise with respect to the radius of the integrating circle, and the image data extraction unit (220)-extracts a plurality of image data simultaneously.

Respectfully submitted,

Lawrence E. Ashery, Reg. No. 34,515 Attorney for Applicants

LEA/fp

Attachment: Abstract

Dated:

November 2, 2005

P.O. Box 980 Valley Forge, PA 19482-0980 (610) 407-0700

The Commissioner for Patents is hereby authorized to charge payment to Deposit Account No. **18-0350** of any fees associated with this communication.

EXPRESS MAIL: Mailing Label No.: <u>EV 579 430 396 US</u>

Date of Deposit: <u>November 2, 2005</u>

I hereby certify that this paper and fee are being deposited, under 37 C.F.R. § 1.10 and with sufficient postage, using the "Express Mail Post Office to Addressee" service of the United States Postal Service on the date indicated above and that the deposit is addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria,

VA 22313-1450.

FP\_I:\MAT\8762US\PAMEND\_01.DOC

Application No.: To Be Assigned MAT-8762US

## **ABSTRACT**

A pupil detection device includes an image data extraction unit for determining a plurality of concentric circles on an eye image respectively as integrating circles; a contour integrating unit for integrating the image data extracted by the image data extraction unit along the respective circumferences of the integrating circles; a pupil radius detection unit for detecting that the integrated value of the integrating circle has changed stepwise; a pupil position detection unit for detecting that the center coordinates of the integrating circle as pupil position coordinates when the integrated value of the integrating circle is changed stepwise with respect to the radius of the integrating circle, and the image data extraction unit extracts a plurality of image data simultaneously.